

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001140**Date Inspected:** 18-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1330**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi, Wu Mingkai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 89M/144 M mockup and OBG floor beam**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Bay 1 - No work.

Bay 2

89 Meter Mockup MUB-MA21 B/J:

QA Inspector Brannon randomly observed ZPMC qualified welder's Mr. Fu Yanjie ID#066268, Mr. Tan Xiangbo ID#066459, Mr. Ge Hingai ID#037780 and Mr. Du Henghua ID#037779 groove welding fill passes joining, piece # mp502-1 to MA38-1 and SA215 weld joints #1, 2 3 & 4. Mr. Fu, Mr. Tan, Mr. Ge and Mr. Du was observed welding in the 2G (horizontal) position utilizing shield metal arc welding (SMAW) process with a 5.0mm diameter electrode, filler metal brand E7018, class THJ506-Fe-1, manual. QA Inspector Brannon observed the ZPMC QC CWI Inspector Sha Zhi verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Sha Zhi to be: preheat temperature of 110°C and welding parameters amps of 227, 224, 221 & 227 respectively. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-4312-TC-p4-2 Rev. 0.

114 Meter Mockup MUC-MA107 B/C:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Xu Xan ID #052917 groove welding fill

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pass for weld joint #3A joining MUC-MA102 to MA111. Mr. Xu was observed welding in the 1G (flat) position utilizing a submerged arc welding (SAW) process with a 4.8mm diameter electrode, filler metal brand EM12k, class JW3 machine. QA Inspector Brannon observed the ZPMC QC Inspector Lu Jianping verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed welding parameters measured by the QC CWI Inspector Lu Jianping welding parameters to be 690 amps, 33.0 volts and a travel speed of 415 mm/min. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2221-C-U2b-S, Revision 0.

Bay 3

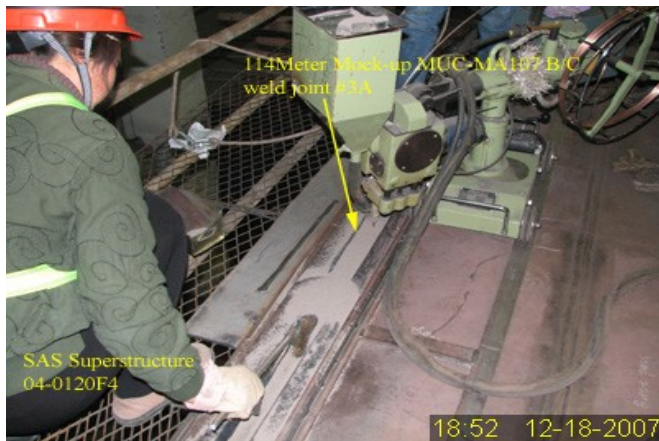
OBG Side Plates SP029:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Jiang Jingteng ID #046830 groove welding fill/cover passes for SP029-01-001 joining PL83 to PL83A. Mr. Jiang was observed welding in the 1G (flat) position utilizing a submerged arc welding (SAW) process with a 4.8mm diameter electrode, filler metal brand EM12k, class JW3 machine. QA Inspector Brannon observed the ZPMC QC Inspector Wu Mingkai verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed welding parameters measured by the QC CWI Inspector Wu Mingkai welding parameters to be 487 amps, 30.0 volts and a travel speed of 415 mm/min. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2221-B-L2c-S-1, Revision 0.

OBG Side Plates

ZPMC QC Lay Tao informed QA Inspector Brannon that side plate SP035 stiffeners 05, 06, 07 & 08 some of the tack had cracked and that QPMC will finish grinding, and re-weld tomorrow.

The following digital photograph below illustrates observation of the activities being performed.



Summary of Conversations:

As stated within the report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By:	Brannon, Sherri	Quality Assurance Inspector
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Reviewed By:	Carreon, Albert	QA Reviewer
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